



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

April 19, 2007

Mr. Keith A. Klein, Manager
Richland Operations Office
United States Department of Energy
P.O. Box 550, MSIN: A7-50
Richland, Washington 99352

Re: Approval of Non-Radioactive Air Emissions Notice of Construction (NOC) Application for
Volpentest Hazardous Materials Management and Emergency Response (HAMMER)
Training and Education Center

Reference: USDOE-RL Letter 07-SED-0227, *Transmittal of Criteria/Toxic Air Pollutant
Notice of Construction (NOC) Application for New Training at the HAMMER
Facility*, dated April 10, 2007

Dear Mr. Klein:

In the reference letter, the United States Department of Energy-Richland Operations (USDOE-RL) petitioned for approval of a NOC for the Volpentest HAMMER Training and Education Center. This letter issues approval for the petitioned operations.

Enclosed is Order No. **DE07NWP-001**, authorizing the proposed operations. The enclosed Order may be appealed. Appeal procedures are described in the Order.

This authorization can be modified, suspended, or revoked, in whole or in part, if Ecology finds that, due to inaccuracies in the petition request, compliance with ambient air quality standards is not ensured.



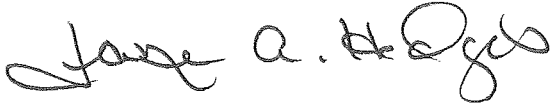
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If you have any questions, contact Doug Hendrickson at 509-372-7983.

Sincerely,

A handwritten signature in cursive script, reading "Jane A. Hedges". The signature is written in dark ink and is positioned above the printed name.

Jane A. Hedges

Program Manager

Nuclear Waste Program

dh/pll

Enclosure

cc: Mary Jarvis, USDOE
Tom Beam, FH
Curt Clement, FH
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE
John Martell, WDOH
Administrative Record: AIR Permits
Environmental Portal

Mr. Keith A. Klein
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bcc/electronic w/enc:

Doug Hendrickson, Ecology
Ron Skinnarland, Ecology
Steve Szendre, Ecology
Oliver Wang, Ecology

bcc/enc:

NWP Central File: Air Permitting

bcc w/o enc:

NWP Reader File

**NON-RADIOACTIVE AIR EMISSIONS
NOTICE OF CONSTRUCTION (NOC) APPROVAL ORDER
CONDITIONS AND RESTRICTIONS**

REGULATORY AUTHORITY:

Pursuant to the Washington State Department of Ecology General Regulations for Air Pollution Sources, Chapter 173-400 Washington Administrative Code (WAC), and Controls for New Sources of Toxic Air Pollutants, Chapter 173-460 WAC, Ecology now finds the following:

FINDINGS:

1. The United States Department of Energy (USDOE) proposes to modify their existing facility (Hanford) located in Richland, Washington.
2. A NOC application was submitted on April 10, 2007. The application was found to be complete on April 11, 2007.
3. Hanford is an existing major stationary source that emits more than 250 tons of a regulated pollutant per year.
4. The proposed project consists of conducting personnel training with various chemicals and mixtures at the Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training and Education Facility.
5. Hanford is located in a Class II Area designated as "attainment" for the purpose of NOC permitting for all criteria air pollutants.
6. Criteria air pollutant emissions from the proposed project are below the Prevention of Significant Deterioration Significant Emission Rates.
7. Criteria air pollutant emissions from the proposed project are below the *de minimus* levels in WAC 173-400-110(5)(d).
8. Toxic Air Pollutant (TAP) emissions from the proposed project are below Small Quantity Emission Rates (SQERs) of WAC 173-460-080(2)(e) and thereby comply with ambient impact standards of WAC 173-460-080.
9. Toxics Best Available Control Technology (T-BACT) for this project has been determined to be reasonable precautions to prevent unintentional fugitive loss in preparation, use, and storage of the chemicals and mixtures to be used in training.
10. The proposed project, if operated as herein required, will provide T-BACT.
11. The proposed project, if operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC and Chapter 173-460 WAC, and the operation thereof will not result in ambient air quality standards being exceeded.
12. The project will have no significant impact on air quality.

THEREFORE, IT IS ORDERED that the project as described in said Notice of Construction application, and as detailed in emissions estimates and impact and control technology assessments submitted to the Washington State Department of Ecology in reference thereto, is approved for construction, installation, and operation, provided compliance with the conditions and restrictions described below. This ORDER shall be identified as NOC ORDER **DE07NWP-001**.

1.0 GENERAL APPROVAL CONDITIONS

1.1 Effective Date

The effective date of this authorization shall be that as signed in Section 3.0. All references to procedures or test methods shall be to those in effect as of the effective date of this ORDER.

1.2 Emission Limits

- 1.2.1 Visible emissions from training operations shall not exceed 20 percent opacity. [WAC 173-400-040(1)]
- 1.2.2 Fugitive emissions from training operations shall be minimized. [WAC 173-400-040(3)(a)]
- 1.2.3 Particulate matter emissions from training materials shall not exceed 1,500 pounds per year (lb/yr). [WAC 173-400-110(5)(d)]
- 1.2.4 Volatile Organic Compound emissions from training materials shall not exceed 4,000 lb/yr. [WAC 173-400-110(5)(d)]
- 1.2.5 Emissions of all TAPs, as identified in Table 1, or newly identified, shall be below their respective SQERs. [WAC 173-460-080(2)(e)]

1.3 Compliance Demonstration

- 1.3.1 Compliance with Approval Condition 1.2.1 shall be met by Tier 2 Visible Emissions Survey requirements of the Hanford Air Operating Permit if visible emissions from training operations materials, other than those from “fog machines,” are exhibited outside training structures.
- 1.3.2 Compliance with Approval Condition 1.2.2 shall be demonstrated by operations and use of procedures which:
 - 1.3.2.1 Keep containers closed when not in use.
 - 1.3.2.2 Ensure proper handling and storage to minimize unintentional losses.
- 1.3.3 Compliance with Approval Condition 1.2.3 shall be demonstrated by material recordkeeping as defined in Condition 2.2.
- 1.3.4 Compliance with Approval Condition 1.2.4 shall be demonstrated by material recordkeeping as defined in Condition 2.2.
- 1.3.5 Compliance with Approval Condition 1.2.5 shall be demonstrated by material recordkeeping as defined in Condition 2.2.

1.4 Manuals

Written procedures or training manuals utilized by the United States Department of Energy and its contractors for all equipment, processes, and controls associated with the proposed activities that have the potential to affect emissions to the atmosphere shall be followed. Manufacturer's instructions may be referenced. The written procedures shall be updated to reflect any modification of the process or operating procedures. Copies of the written procedures shall be available to Ecology upon request.

2.0 NOTIFICATIONS AND SUBMITTALS

2.1 Addressing

Any required notifications and submittals required under these Approval Conditions shall be sent to:

Washington State Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

2.2 Recordkeeping

Specific records shall be kept on the Hanford Site by the Permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent 60 month period. The records to be kept shall include the following:

1. Fugitive release control procedure training.
2. Visible emission event surveys.
3. Event records which detail non-compliance with fugitive release control procedures or unintentional releases and response to such events.
4. Material balance records which detail materials receipt and disposal with a summary assessment of losses, calculated each calendar quarter.

2.3 Reporting

Visible emission surveys, when conducted pursuant to Compliance Demonstration requirement 1.3.1, shall be submitted to Ecology in accord with WAC 173-400-107 with an assessment of the cause of visible emissions and a report of the actions taken to prevent further excess visible emissions.

Emission of any TAP exceeding SQERs detailed in Table 1 shall be reported to Ecology in accord with WAC 173-400-107.

Identification of any TAP not previously identified within the NOC Application, as defined in Table 1, shall be submitted to Ecology within 90 days of initiation of use in training with an estimate of annual emissions.

3.0 APPROVAL ORDER AND RESTRICTIONS

This Authorization may be modified, suspended, or revoked in whole, or in part, for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this authorization.
2. Obtaining this authorization by misrepresentation, or failure to fully disclose all relevant facts.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

Any person aggrieved by this ORDER may obtain review thereof by application, within 30 days of receipt of this ORDER, to:

Pollution Control Hearings Board
P.O. Box 40903
Olympia, Washington 98504-0903

Concurrently, copies of the application must be sent to:

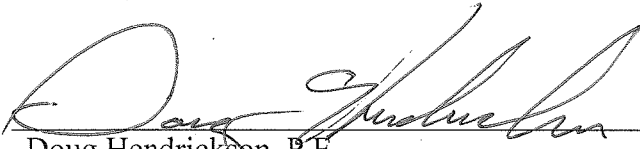
Washington State Department of Ecology
P. O. Box 47600
Olympia, Washington 98504-7600

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

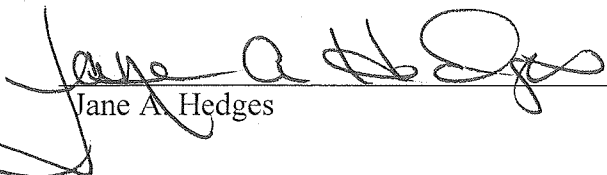
These procedures are consistent with the provisions of Chapter 43.21B RCW, and the rules and regulations adopted thereunder.

DATED at Richland, Washington, this 19th day of April 2007.

REVIEWED AND PREPARED BY:


Doug Hendrickson, P.E.

APPROVED BY:


Jane A. Hedges

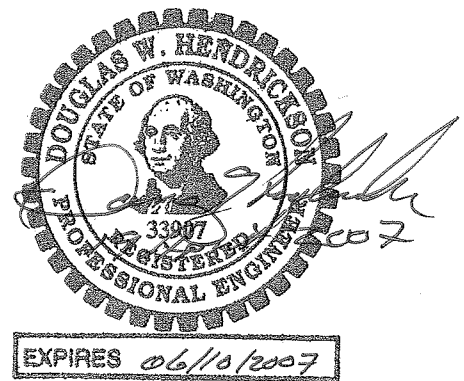


Table 1: Volpentest HAMMER Toxic Air Pollutant Emissions Estimate

Chemical/ Formula/ Synonyms	Toxic Air Pollutant	Chemical Abstracts Service Registry Number	TAP Class	Potential Emissions Est. (lb/yr)	ASIL ($\mu\text{g}/\text{m}^3$) 24-Hour Average ¹	Small Quantity Emission Rate (SQER) (lb/hour)
Acetone - CH_3COCH_3 (Propanone, Dimethylketone)	Acetone	67-64-1	B	3.3	5,900	5
Anhydrous Ammonia - NH_3 (R717, Nitro-Sil, Am-Fol, Spirit of Hartshorn)	Ammonia	7664-41-7	B	2	100	2
Barium Nitrate - $\text{Ba}(\text{NO}_3)_2$ (Nitrobarite; Barium Dinitrate; Nitric Acid, Barium salt)	Barium, soluble compounds Ba	C7440-39-3	B	0.56	1.70	0.02
Coleman Fuel - Mixture of Cyclohexane, Pentane, Heptane, Octane and Nonane (Hydrotreated Light Distillate, Calumet Lantern Fuel, Amsol 10, Kensol 10, White gas)				11.5		
	Cyclohexane	110-82-7	B	1.725	3,400	5
	Pentane	109-66-0	B	2.3	6,000	5
	Heptane (n-Heptane)	142-82-5	B	2.875	5,500	5
	Octane	111-65-9	B	2.3	4,700	5
	Nonane	111-84-2	B	2.3	3,500	5
Ethanol (95%) - $\text{C}_2\text{H}_5\text{OH}$ (Ethyl alcohol)	Ethyl alcohol	64-17-5	B	1.74	6,300	5
Heptane (n-heptane)	Heptane (n-Heptane)	142-82-5	B	12.96	5,500	5
Hydrogen Peroxide (>20%) - H_2O_2	Hydrogen peroxide	7722-84-1	B	4.96	4.7	0.02
Iodine - I_2	Iodine	7553-56-2	B	0.14	3.3	0.02
Isopropyl Alcohol - $\text{CH}_3\text{CHOHCH}_3$ (Isopropanol, 2-propanol)	Isopropyl alcohol	67-63-0	B	1.64	3,300	5
Methanol - CH_3OH (Methyl alcohol, Wood alcohol, Carbinol)	Methyl alcohol	67-56-1	B	1.74	870	5
Nitric Acid - HNO_3 (Aqua Fortis, Engravers Acid, RFNA, WFNA)	Nitric acid	7697-37-2	B	3.26	17	0.2
Nitromethane - CH_3NO_2 (Nitrocarbol)	Nitromethane	75-52-5	B	4.74	830	5

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Phosphorus Trichloride - PCl_3 (Trichlorophosphine, Phosphorus Chloride)	Phosphorus trichloride	7719-12-2	B	1.1	3.7	0.02
Powdered Aluminum - Al	Aluminum, as AL pyro powders	C7429-90-5	B	0.12	33	0.2
Sodium Azide - NaN_3 (Azium, Sodium Salt of Hydrazoic Acid, Smite)	Sodium azide	26628-22-8	B	0.44	1	0.02
Sodium Cyanide - NaCN (Hydrocyanic Acid, Sodium Salt)	Cyanides, as CN	57-12-5	B	0.02	17	0.2
Sodium Hydroxide - NaOH (Lye, Caustic Soda, any number of drain cleaners)	Sodium hydroxide	1310-73-2	B	1.48	6.7	0.02
Starting Fluid - (primary components are ethyl ether and n-heptane)				1.46		
	Ethyl ether	60-29-7	B	0.73	4,000	5
	Heptane (n-Heptane)	142-82-5	B	0.73	5,500	5
Sulfuric Acid - H_2SO_4 (Oil of Vitriol, Babcock Acid)	Sulfuric acid	7664-93-9	B	4.64	3.3	0.02
Thionyl Chloride - SOCl_2 (Sulfinyl Chloride, Sulfurous Oxychloride, Thionyl Dichloride)	Thionyl chloride	7719-09-7	B	0.12	16	0.2
Toluene - $\text{C}_6\text{H}_5\text{CH}_3$ (Methylbenzene, Phenylmethane, Toluol)	Toluene	108-88-3	B	3.6	400	5
TAPS Total (lb/yr)				61.5		

Notes: 1: ASIL = Acceptable Source Impact Level of WAC 173-460-160